

BIOSTRATIGRAPHIC DATA ON THE CRETACEOUS-TERTIARY BOUNDARY DEPOSITS OF THE IONIAN ZONE

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Lithologically, the Maastrichtian deposits of the Ionian zone are represented by massive turbiditic limestones of variable thickness. In these deposits, *Abathomphalus mayaroensis*, *Rositta contusa*, *Globotruncanita sturati*, and *G. stuartiformis* are found together with *Siderolites calcitropoides*, *Omphalocyclus macroporus*, *Orbitoides media* and rudistid fragments. These limestones are dated as *Abathomphalus mayaroensis* zone.

The Paleocene deposits consist of massive breccia-like turbiditic limestones with micritic limestones on top. From base to top, *Globigerina eugubina*, *Morozovella pseudobulloides*, *M. angulata*, *Planorotalites pseudomenardii*, and *Morozovella vela-scoensis* have been distinguished. Together with planktonic foraminifera, *Miscellanea miscella* and *Discocyclina* have been recorded. Rudistae, *Globotruncana siderolites* and *Orbitoides* are re-reposited in Paleocene sediments.

Microfacies studies provide evidence that parts of the *Abathomphalus mayaroensis* zone and of the *Globigerina eugubina* zone are missing. This may either be connected with the lack of deposition or with the turbiditic sedimentation which may not have allowed the development of a fauna in Paleocene time.

FORAMINIFERA AND NANNOPLANKTON BIOZONATION OF THE PROPOSED TETHYAN CAMPANIAN-MAASTRICHTIAN STANDARD SECTION AT EL KEF

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The Campanian-Maastrichtian sequences of the El Kef section (Tunisia), including the stratotype for the proposed Kefian (SALAJ, 1980, 1986), have been recommended together with the Paleocene as hypostratotypes or stratotypes for the Tethyan realm (SALAJ, 1973, 1974, 1978; SALAJ and MAAMOURI, 1982; SALAJ, POZARYSKA and SZCZECZURA, 1976). A detailed micro-biostratigraphical zonation, mainly of the Upper Senonian part, has been elaborated. It is based on foraminifera (SALAJ, 1980), nannoplankton (VERBECK, 1976), and partly also on the megafauna (SALAJ and WIEDMANN, 1988).

Compared with the standard division of the Campanian-Maastrichtian, this zonal

division is much more detailed. Consequently, paleogeographic-tectonic events can be dated more precisely. These events include transgressions, regressions and stratigraphical hiatuses accompanied by hardgrounds, glauconite and phosphate. They are often connected with the sedimentation on a raised substratum or in prevailing, more or less isolated basins. These can be observed in many parts of the world, e.g. the Near East (Reiss, et al., 1985), Libya (SALAJ and NAIRN, 1987), TUNISIA (Dlala et al., 1990; MATMATI et al., 1991), and Greece (KATSIIVRIAS et al., 1991). Significant events occurred in the *Contusotruncana scutilla*, *Globotruncana stephensoni*, *Archaeoglobotruncana kefiana*, *Globotruncana gagnebini* (or *Racemiguembelina textulariformis*) and *Kassabiana falsocalcarata* zones. They therefore occurred in zones (or subzones) not comprised in the above-mentioned Campanian-Maastrichtian standard zonation of the Tethyan realm (CARON, 1985). Needless to say, they are not known from the incomplete stratotypes (VAN HINTE, 1965; SALAJ, 1973, 1980; REISS et al., 1985).

We therefore propose the micro-biostratigraphical subdivision of the El Kaf section as a standard zonation of the Tethyan realm (Tab. 1). The Cretaceous-Tertiary boundary in El Kaf was accepted as a boundary stratotype by the International Geological Congress in Washington, 1989. This section could equally serve for defining one or more stratotype boundaries of the Campanian-Maastrichtian interval.

It has been proposed by SALAJ (1988) that either the El Kaf section or the Dj. Fguira Salah section should be the Santonian-Campanian boundary stratotype. In both cases the stratotype boundary would be within a marl sequence. The base of the Campanian would be determined by the first occurrence of *Globotruncana arca* (GUSHMAN), *Neoffabellina rugosa* (d'ORBIGNY), *Stensioeina labyrinthica* CUSHMAN and DORSEY and the nannoplankton species *Aspidofithus parvus* (STRADNER) appear at the same level.

Bibliography of zones: *arca* I.Z. SALAJ and SAMUEL, 1966; *scutilla* I.Z. VAN HINTE, 1976 modified by SALAJ, 1980; *ventricosa* I.Z. DALBIEZ, 1955, modified by STURM, 1969; *rugosa* I.S.Z. SALAJ and SAMUEL, 1966; *subspinosa* I.S.Z. VAN HINTE, 1976; *calcarata* T.R.Z. AUROZE and de KLASZ, 1954, HERM, 1982; *stephensoni* I.Z. SALAJ, HERM, MAAMOURI and SALAJ, 1983 (*Globotruncana Stephensoni* PESSAGNO is not a synonym of *Globotruncana orientalis* EL NAGGAR - see SALAJ, 1983, p. 194); *Kefiana* I.Z. BELLIER and al. 1983; *falsostuarti* I.Z. SALAJ and SAMUEL, 1966, modified by BELLIER and al., 1983; *subcircumnodifer* I.S.Z. PESSAGNO, 1967; *gagnebini* I.S.Z. BELLIER and al., 1983; *gansseri* I.Z. BOLLI, 1957; *mayaroensis* T.R.Z. BOLLI, 1957 and *falsocalcarata* I.Z. of SOLAKIUS, 1981, same level as that of SALAJ, 1980.